

WHAT IS CLAIMED IS:

1. A throttle device for an internal combustion engine comprised of:

a throttle shaft rotating integrally with a throttle valve and having a sliding part with respect to a bearing at one end,

a throttle body having a bore wall holding inside it said throttle valve in an operable state and a tubular bearing support supporting said sliding part of the throttle shaft, and

an integral plug-type slide bearing accommodated and held in an inner circumference of said bearing support of the throttle body, rotatably supporting said sliding part of the throttle shaft, and air-tightly closing an opening of said bearing support of the throttle body,

said throttle body having in said bearing support a shaft insertion hole in which said sliding part of the throttle shaft is inserted and having a ring-shaped end face at an open side of said bearing support, and

said integral plug-type slide bearing having a closed-bottom tube rotatably and slidably supporting said sliding part of the throttle shaft and fit at its outer circumference in said shaft insertion hole with a clearance and a flange having an outer diameter larger than that tube and affixed to a ring-shaped end face of said bearing support.

2. A throttle device for an internal combustion engine as set forth in claim 1, wherein

said bearing support of the throttle body is formed integrally by a heat resistant plastic,

said flange of the integral-plug type slide bearing is formed by the same type of plastic as said bearing support and has a ring-shaped end face fixed by welding to said ring-shaped end face of the bearing support,

said ring-shaped end face of the bearing support is formed facing the outside from a center of said bore wall in an axial direction of said throttle shaft, and

said ring-shaped end face of said flange is formed facing the center of said bore wall in an axial direction of said throttle shaft and facing said ring-shaped end face of the bearing support.

3. A throttle device for an internal combustion engine as set forth in claim 2, wherein

when assembling said integral plug-type slide bearing into said bearing support of the throttle body, said tube is centered with said throttle shaft and the ring-shaped end face of said flange is fixed by welding to the ring-shaped end face of said bearing support.

4. A throttle device for an internal combustion engine as set forth in claim 1, wherein

said bearing support of the throttle body is integrally formed by a heat resistant plastic,

an inner circumference of said shaft insertion hole is formed as a cylindrical surface centered about the axial center of said throttle shaft,

said tube of said integral plug-shaped bearing is formed from a plastic of the same type as said bearing support and has an outer circumference fixed by fusing to the inner circumference of said shaft insertion hole, and

the outer circumference of said tube is formed as a cylindrical surface centered about the axial center of said throttle shaft.

5. A throttle device for an internal combustion engine as set forth in claim 4, wherein

when assembling said integral plug-type slide bearing into said bearing support of the throttle body, a fusing use molten plastic is poured into the ring-shaped clearance formed between the outer

circumference of said tube and the inner circumference of said shaft insertion hole and the outer circumference of said tube is fixed by welding to the inner circumference of said shaft insertion hole.

6. A throttle device for an internal combustion engine as set forth in claim 1, wherein

said integral plug-type slide bearing has at least one of a function of rotatably and slidably supporting said sliding part of the throttle shaft, a function of preventing entry of foreign matter from the outside to the inside, and a function of preventing leakage of air from the inside to the outside.

7. A throttle device for an internal combustion engine as set forth in claim 1, wherein

said integral plug-type slide bearing is formed integrally by insert molding by a material superior in slidability at only an inner circumference of said tube.